

REMARKS/ARGUMENTS

I. Introduction:

Claims 1, 3, 7, 8, 10-14, 19, 20, 24, and 26 are amended and claims 5-6 are canceled herein. Claims 33-46 are withdrawn from consideration. With entry of this amendment, claims 1-4 and 7-32 will be pending.

II. Election/Restrictions:

Applicants elect group I (claims 1-32), without traverse.

III. Claim Objections:

Claim 8 has been amended to replace “a second set of paths” with --said second set of paths--. The claim objection should therefore be withdrawn.

IV. Claim Rejections - 35 U.S.C. 112:

Claim 11 has been amended to remove reference to “said second routing protocol”. Claims 13 and 14 have been amended to depend from claim 1, which now provides antecedent basis for “said second routing protocol”.

As amended, claims 11 and 13-14 are believed to comply with the requirements of 35 U.S.C. 112.

V. Claim Rejections - 35 U.S.C. 103:

Claims 1, 3-8, 10-11, and 13-14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Application Publication No. 2007/0053300 (Zhu et al.) in view of U.S. Patent No. 6,665,273 (Goguen et al.).

Claim 1 is directed to a method of determining traffic paths between one or more source-destination node pairs in a communications network. The method includes starting from a first set of paths between the source-destination node pairs, determining a second set of paths between the source-destination node pairs while taking into account a set of constraints, such that the second set of paths emulates the first set of paths.

Claim 1 has been amended to specify that the first set of paths is related to the use of a first routing protocol and the second set of paths is determined for use with a second routing protocol, different from the first routing protocol.

Zhu et al. disclose multi-path shortest-path-first computations and distance-based interface selection for VoIP traffic. A cost is assigned to each of a plurality of internal segments between a multi-path router instance and the network interfaces associated with the multi-path router instance. An aggregate cost is calculated for each of a plurality of traffic paths originating at the multi-path router instance in the source IP device and extending through each of the network interfaces associated with the multi-path router instance to a destination IP device in the network. A list of IP paths is generated, and the paths in the list are ranked based on the calculated cost. The path costs and rankings are updated in response to segment cost changes.

In rejecting the claims, the Examiner refers to paths A and B as a first set of paths and C and G as a second set of paths. However, path G is not a traffic path between the same source-destination node pair as paths A and B. As described at paragraph [0059] of Zhu et al., SPF instance sets costs for interior segments (350, 352, and 354) so that the paths A, B, and C appear to have the same aggregate costs. As

shown by the network segment cost table of Fig. 3, these paths each have different costs (e.g., path A (segment 316 + segment 326) = 73, path C (segment 320 + segment 330) = 67). Thus, there is no second set of paths that emulate a first set of paths.

As noted by the Examiner, Zhu et al. do not disclose taking into account a set of constraints, such that the second set of paths emulates the first set of paths.

Goguen et al. disclose dynamically adjusting MPLS traffic engineering tunnel bandwidth. In rejecting the claims, the Examiner refers to constraint-based routing recited in columns 3 and 4 of Goguen et al. This section of the patent describes how when constraint-based routing is used, an operator only specifies the amount of traffic that is expected to flow in a TE tunnel and the MPLS TE system then calculates the paths based on constraints suitable for carrying the load and establishes explicit paths. These paths are established by considering resource requirements and resource availability, instead of simply using shortest path, as is done in Zhu et al. Goguen et al. therefore teach away from simply using short path as done in Zhu et al.

Moreover, neither Zhu et al. nor Goguen et al. show or suggest wherein a first set of paths is related to the use of a first routing protocol and a second set of paths is determined for use with a second routing protocol, different from the first routing protocol, as set forth in amended claim 1. Zhu et al. use OSPF protocols. Goguen et al. use MPLS protocols. In rejecting the claims, the Examiner refers to the Background of the Invention at columns 1 and 2 of Goguen et al., which describes how IGP may be used to build a routing table. With regard to constraint-based routing, the Background describes how an MPLS TE system is used to calculate paths based on constraints. The cited references thus fail to teach determining a second set of paths between source and destination node pairs such that the second set emulates the first set of paths and the first set of paths is related to the use of a first routing protocol and the second set of paths is determined for use with a second routing protocol, as set forth in the claims.

Accordingly, claim 1 is submitted as patentable over the Zhu et al. and Goguen et al.

Claims 2-4, 7-23, 26-32, depending either directly or indirectly from claim 1, are submitted as patentable for at least the same reasons as claim 1.

With regard to claim 8, there is no teaching of a set of constraints related to a second set of paths. The constraints discussed in Goguen et al. are used in setting up primary TE tunnels.

Claim 26 is further submitted as patentable over U.S. Patent Application Publication No. 2007/0124488 (Baum et al.), which does not show or suggest switching from an interior gateway protocol to a multi-protocol label-switching traffic engineering protocol. In rejecting the claim, the Examiner refers to Fig. 5 of Baum et al., which shows migration to other types of physical transport and switching/routing protocols (Ethernet, Frame Relay, etc.).

Claims 24 and 25 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Zhu et al. in view of Goguen et al. and U.S. Patent No. 7,233,574 (Worfolk et al.). Claims 24 and 25 are submitted as patentable for at least the reasons discussed above with respect to claim 1. As previously discussed, the cited references do not show or suggest a first set of paths related to the use of a first routing protocol and a second set of paths determined for use with a second routing protocol. Worfolk et al. do not overcome the deficiencies of the primary references.

The other references cited, including U.S. Patent Nos. 6,650,620 (Neogi), 5,519,836 (Gawlick), and 7,130,262 (Cortez), and U.S. Patent Application Publication Nos. 2006/0039364 (Wright), 2001/0012298 (Harshavadhana), 2007/0286201 (Prager), 2004/0202111 (Beshai), 2005/0018693 (Dull), 2007/0124488 (Baum), 2004/0249971 (Klinker), and 2004/0052207 (Charny), do not overcome the deficiencies of the primary references.

VI. Conclusion:

For the foregoing reasons, Applicants believe that all of the pending claims are in condition for allowance and should be passed to issue. If the Examiner feels that a telephone conference would in any way expedite the prosecution of the application, please do not hesitate to call the undersigned at (408) 399-5608.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'C. Kaplan', with a long horizontal flourish extending to the right.

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